

ABSTRACT

5 A sensor platform, based on a planar optical thin-film waveguide is used to determine one or more luminescences from one or more measurement areas on the sensor platform. The sensor platform has a first optically transparent layer on a second optically transparent layer of lower refractive index than the first optically transparent layer, and at least one grating structure to incouple excitation light to the measurement areas or to outcouple luminescence light from the measurement areas. An optical system is also used for
10 luminescence determination. Further, an analytical system having the sensor platform, the optical system, and a supply device to bring one or more samples in contact with the measurement areas on the sensor platform is used for luminescence determination.